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| Module | **Lesson** | **Vocab and Tools** | **Standards** |
| Linear Equations (Module 4)  Linear Equations (Module 4) | 1: Writing Equations Using Symbols  3: Linear Equations in x  4: Solving a Linear Equation  6: Solutions of a Linear Equation  7: Classification of Solutions  8: Linear Equations in Disguise  9: An Application of Linear Equations  **Assessment A**  *Supplement with Equation/Pattern Problems (Kelcie will provide)*  11: Constant Rate  12: Linear Equations in Two Variables  14: The Graph of a Linear Equations-Horizontal and Vertical Lines  15: The Slope of a Non-Vertical Line  16: The Computations of the Slope of a Non-Vertical Line  17: The Line Joining Two Distinct Points of the Graph y = mx + b has Slope m  18: There is Only One Line Passing Through a Given Point with a Given Slope  19: The Graph of a Linear Equation in Two Variables is a Line  20: Every Line is a Graph of a Linear Equation  21: Some Facts about Graphs of Linear Equations in Two Variables  22: Constant Rates Revisited  *Supplement with Holt On Core Unit 2 Problem Solving*  **Assessment B**  23: The Defining Equation of a Line  24: Introduction to Simultaneous Equations  25: Geometric Interpretations of the Solutions of a Linear System  26: Characterization of Parallel Lines  27: Nature of Solutions of a System of Linear Equations  28: Another Computational Method of Solving a Linear System  29: Word Problems  *Supplement with Holt Oncore Unit 3 Problem Solving*  **Assessment C** | New or Recently Introduced Terms  **Slope** (*Slope* is a number that describes the “steepness” or “slant” of a line. It is the constant rate of change. Example: The slope, of the graph of line to the right is )  **Solution to a System of Linear Equations** (The *solution to a system of linear equations* is a pair of numbers from the domain of the variables that, when each number from the pair is substituted into all instances of its corresponding variable, makes the equation a true number sentence. Example: The solution to the system of linear equations is the ordered pair because the ordered pair is a solution to each linear equation of the system, and it is the point on the plane where the graphs of the two equations intersect.)  **System of Linear Equations** (A *system of linear equations*, also referred to as simultaneous linear equations, is the set of at least two linear equations. Example: is a system of linear equations.)  Familiar Terms and Symbols[[1]](#footnote-1)  Coefficient  Equation  Like terms  Linear Expression  Solution  Term  Unit rate  Variable  **Suggested Tools and Representations**  Scientific calculator  Online graphing calculator (for example: <https://www.desmos.com/calculator>)  Graph paper  Straight-edge | 8.EE.B.5 Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. *For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.*  8.EE.B.6 Use similar triangles to explain why the slope *m* is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation *y = mx* for a line through the origin and the equation for a line intercepting the vertical axis at .  8.EE.C.7 Solve linear equations in one variable.  a. Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form *, ,* or results (where and are different numbers).  b. Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.  8.EE.C.8 Analyze and solve pairs of simultaneous linear equations.  a. Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously.  b. Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection. *For example, and have no solution because cannot simultaneously be and .*  c. Solve real-world and mathematical problems leading to two linear equations in two variables. *For example, given coordinates for two pairs of points, determine whether the line through the first pair of points intersects the line through the second pair.* |

1. These are terms and symbols students have seen previously. [↑](#footnote-ref-1)